

CLAIMS

1. A coating material comprising: cordierite powder as a main component having a tap bulk density of 1.3 g/cm³ or more; and water.

5 2. The coating material according to claim 1, wherein an average particle diameter of the cordierite powder is in a range of 20 to 55 μm, and a content of a powder component having a particle diameter of 44 μm or less in the cordierite powder is 80 mass% or less with respect to the whole cordierite powder.

10 3. The coating material according to claim 2, wherein the average particle diameter of the cordierite powder is in a range of 25 to 55 μm.

4. A coating material comprising:

15 ceramic powder as a main component; and water,

wherein an average particle diameter of the ceramic powder is in a range of 20 to 55 μm, and a content of a powder component having a particle diameter of 44 μm or less in the ceramic powder is 80 mass% or less with respect to the whole ceramic powder.

20 5. The coating material according to claim 4, wherein the average particle diameter of the ceramic powder is in a range of 25 to 55 μm.

25 6. The coating material according to any one of claims 1 to 5, further comprising: at least one selected from the group consisting of ceramic fiber, silica sol, and alumina

sol.

7. The coating material according to any one of claims 1 to 6, for use in coating a surface of a porous body formed of a ceramic and having a predetermined shape and thereafter drying and/or firing the material to thereby form an outer wall on the surface of the porous body.

8. A ceramic honeycomb structure comprising:

a cell structure constituted of a porous body having a plurality of cells, each cell being surrounded by

partition walls and functioning as a fluid channel; and

an outer wall disposed in such a manner as to coat an outer peripheral portion of the cell structure and constituted of a porous body formed of a material containing ceramic powder as a main component,

wherein a surface roughness Ra of the outer wall is in a range of 5 to 50 μm .

9. The ceramic honeycomb structure according to claim 8, wherein the ceramic powder forming the outer wall is cordierite powder having a tap bulk density of 1.3 g/cm³ or more.

10. The ceramic honeycomb structure according to claim 8 or 9, wherein an average particle diameter of the ceramic powder forming the outer wall is in a range of 20 to 55 μm , and a content of a powder component having a particle diameter of 44 μm or less in the ceramic powder is 80 mass% or less with respect to the whole ceramic powder.

11. A method for producing a ceramic honeycomb structure,

comprising the steps of:

applying a coating material containing cordierite powder as a main component and water in such a manner as to coat an outer periphery of a cell structure constituted of a porous body having a plurality of cells, each cell being surrounded by partition walls and functioning as a fluid channel; and

drying and/or firing the applied coating material to thereby form an outer wall,

wherein a tap bulk density of the cordierite powder is 1.3 g/cm³ or more.

12. The method for producing the ceramic honeycomb structure according to claim 11, wherein an average particle diameter of the cordierite powder is in a range of 20 to 55 μm , and a content of a powder component having a particle diameter of 44 μm or less in the cordierite powder is 80 mass% or less with respect to the whole cordierite powder.

13. The method for producing the ceramic honeycomb structure according to claim 12, wherein the average particle diameter of the cordierite powder is in a range of 25 to 55 μm .

14. A method for producing a ceramic honeycomb structure, comprising the steps of:

applying a coating material containing ceramic powder as a main component and water in such a manner as to coat an outer periphery of a cell structure constituted of

a porous body having a plurality of cells, each cell being surrounded by partition walls and functioning as a fluid channel; and

5 drying and/or firing the applied coating material to thereby form an outer wall,

wherein an average particle diameter of the ceramic powder is in a range of 20 to 55 μm , and a content of a powder component having a particle diameter of 44 μm or less in the ceramic powder is 80 mass% or less with respect
10 to the whole ceramic powder.

15. The method for producing the ceramic honeycomb structure according to claim 14, wherein the average particle diameter of the cordierite powder is in a range of 25 to 55 μm .

15 16. The method for producing the ceramic honeycomb structure according to any one of claims 11 to 15, wherein the coating material further comprises: at least one selected from the group consisting of ceramic fiber, silica sol, and alumina sol.